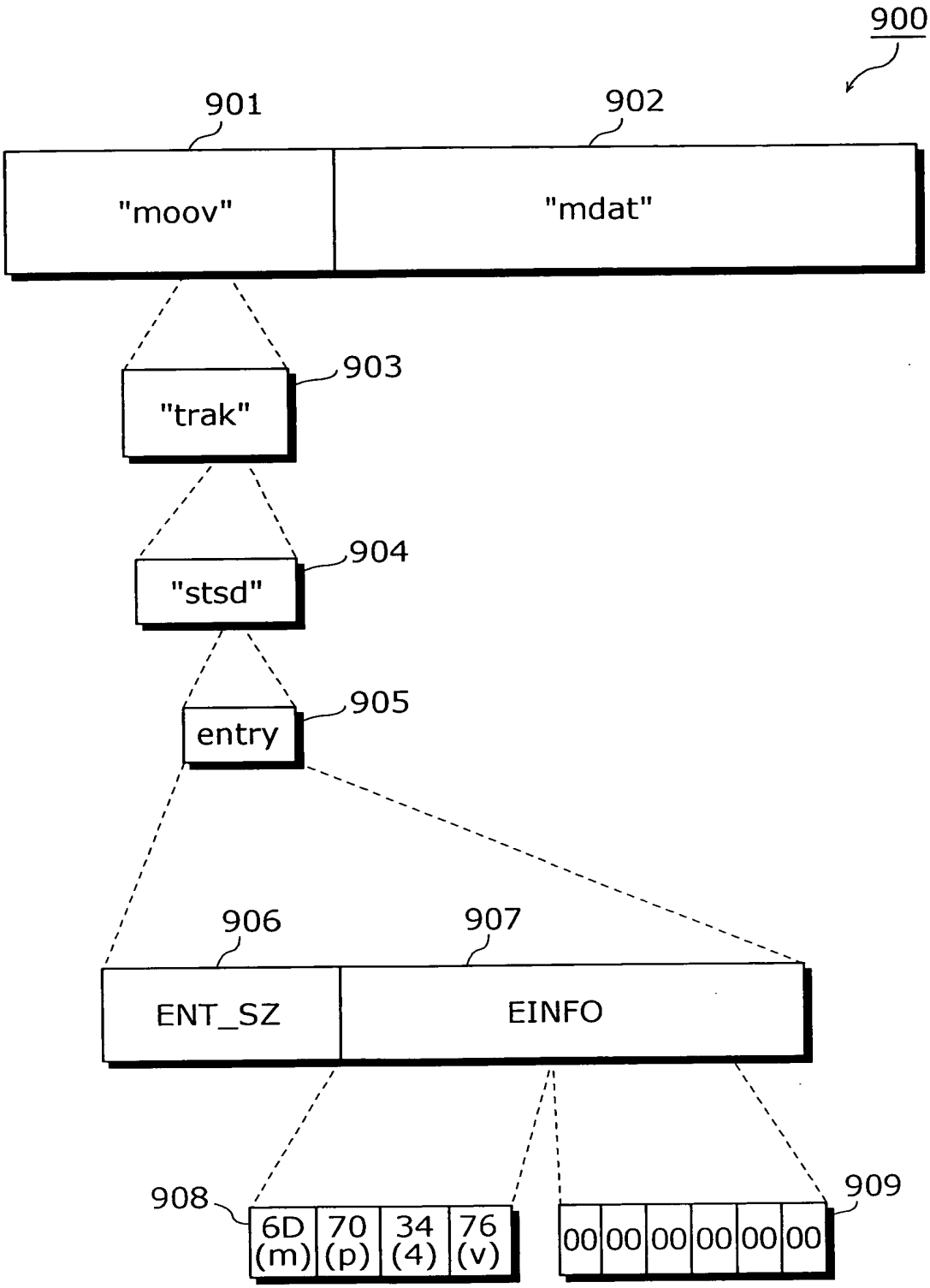
FIG. 1


900
901
902
"moov"
"mdat"
903
"trak"
904
"stsd"
905
entry
906
907
ENT_SZ
EINFO
908
6D (m)
70 (p)
34 (4)
76 (v)
909
00 00 00 00 00 00

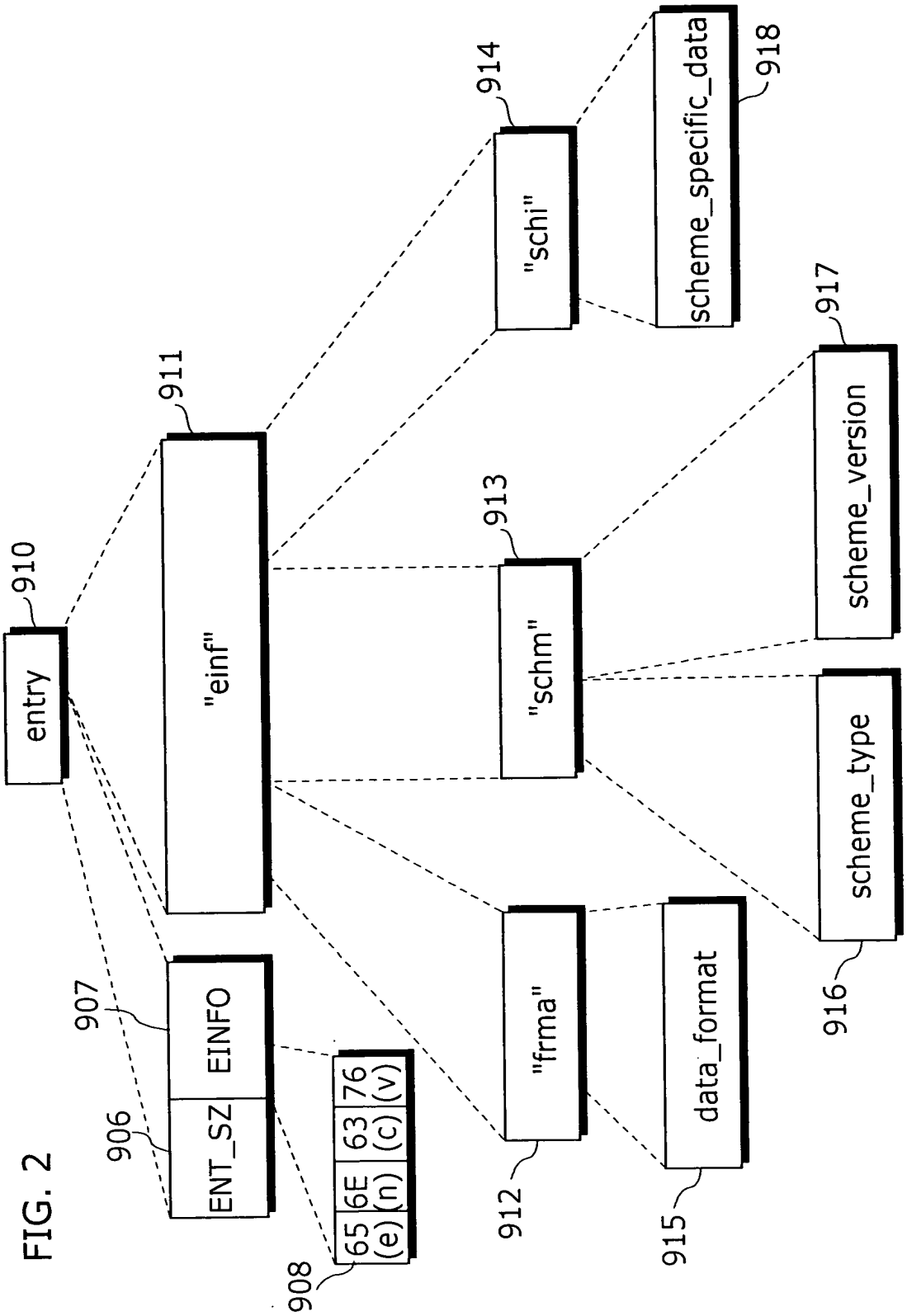
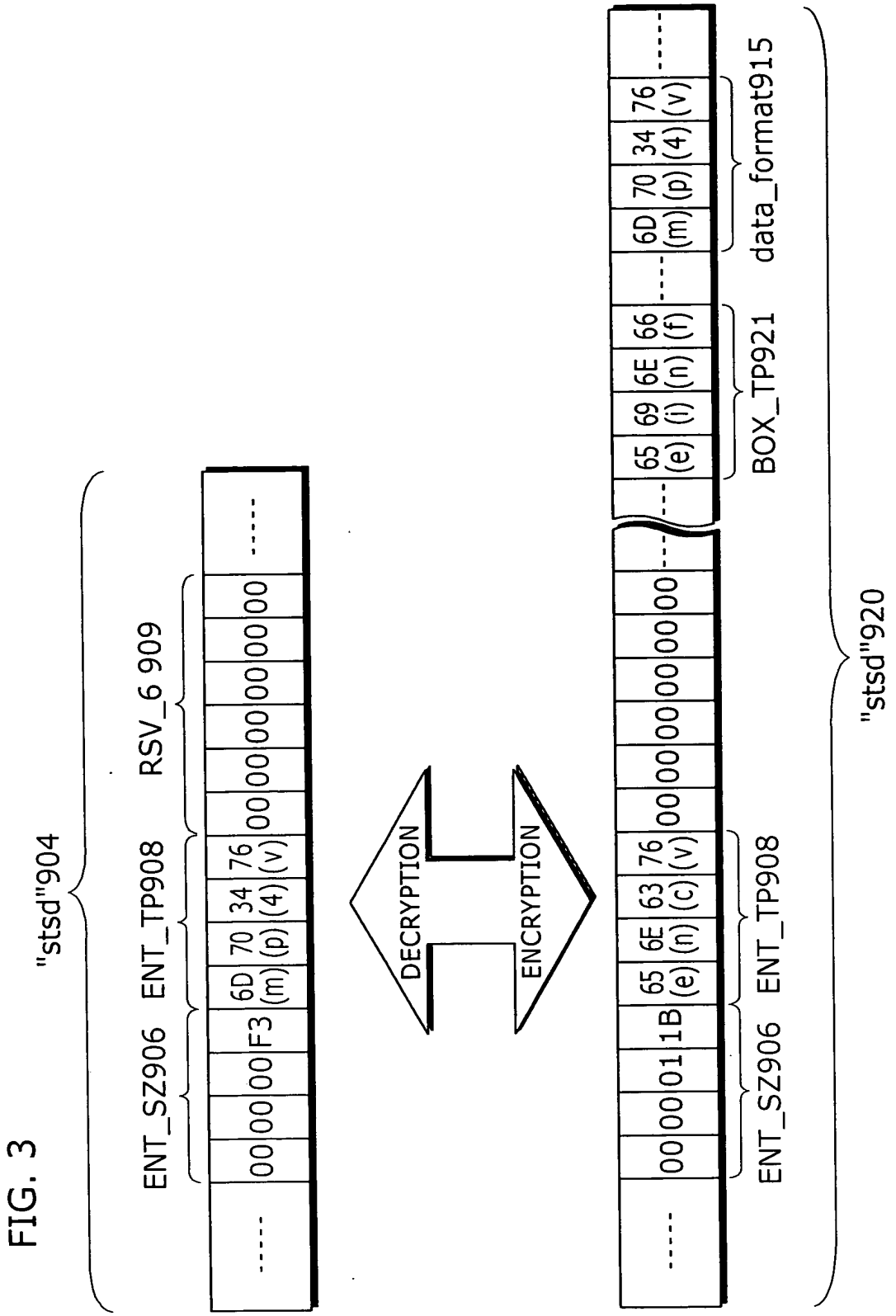

entry
910
"einf"
911
EINFO
907
ENT_SZ
906
65 (e)
6E (n)
63 (c)
76 (v)
908
"schi"
914
scheme_specific_data
918
"schm"
913
scheme_version
917
scheme_type
916
"frma"
912
data_format
915

FIG. 2

FIG. 3


"stsd"904
ENT_SZ906
ENT_TP908
RSV_6 909
00 00 00 F3 6D (m) 70 (p) 34 (4) 76 (v) 00 00 00 00 00 00
DECRYPTION
ENCRYPTION
00 00 01 1B 65 (e) 6E (n) 63 (c) 76 (v) 00 00 00 00 00 00 00
65 (e) 69 (i) 6E (n) 66 (f)
6D (m) 70 (p) 34 (4) 76 (v)
BOX_TP921
data_format915
ENT_SZ906
ENT_TP908
"stsd"920

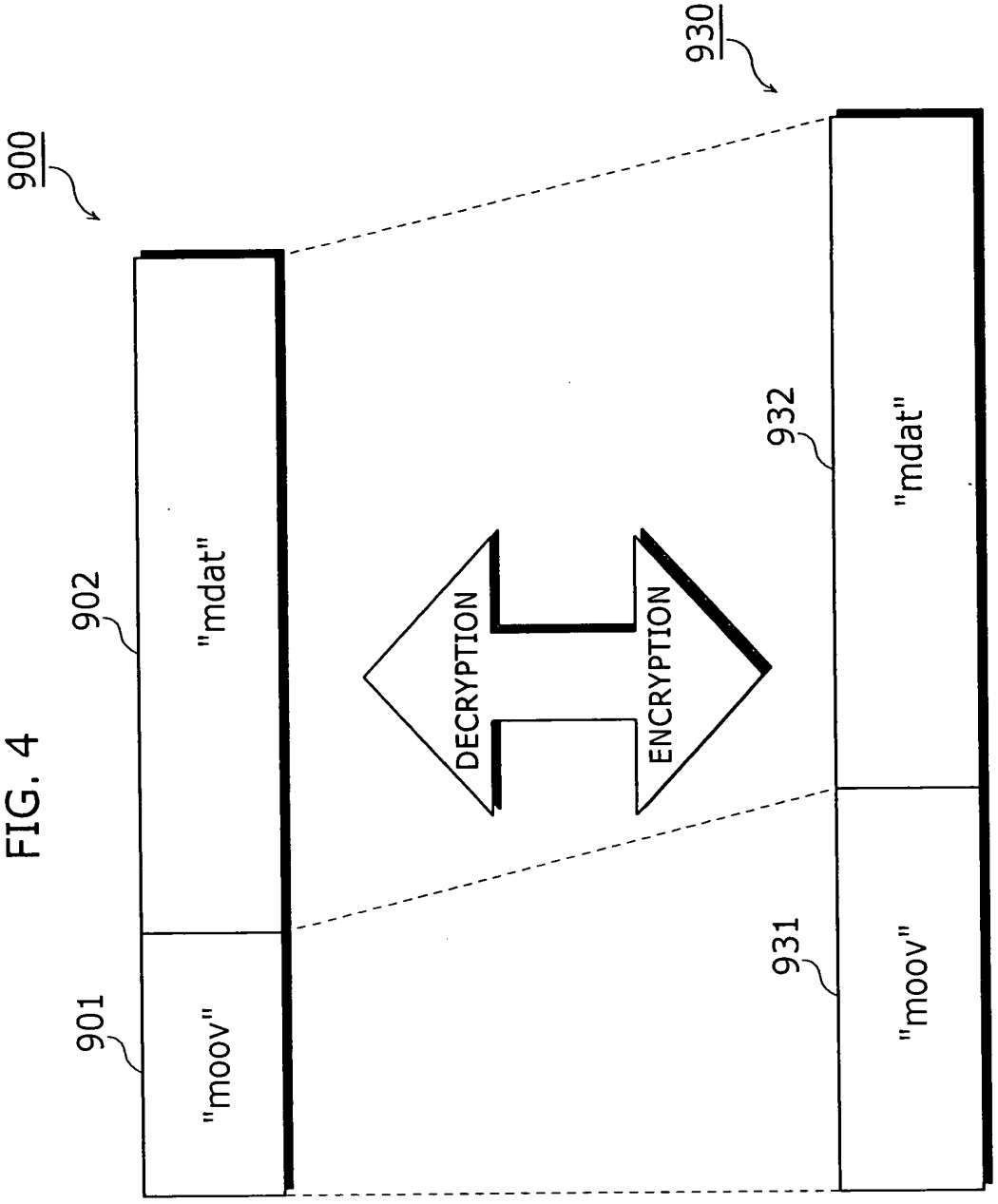

900
902
"mdat"
901
"moov"
DECRYPTION
ENCRYPTION
930
932
"mdat"
931
"moov"

FIG. 4

FIG. 5

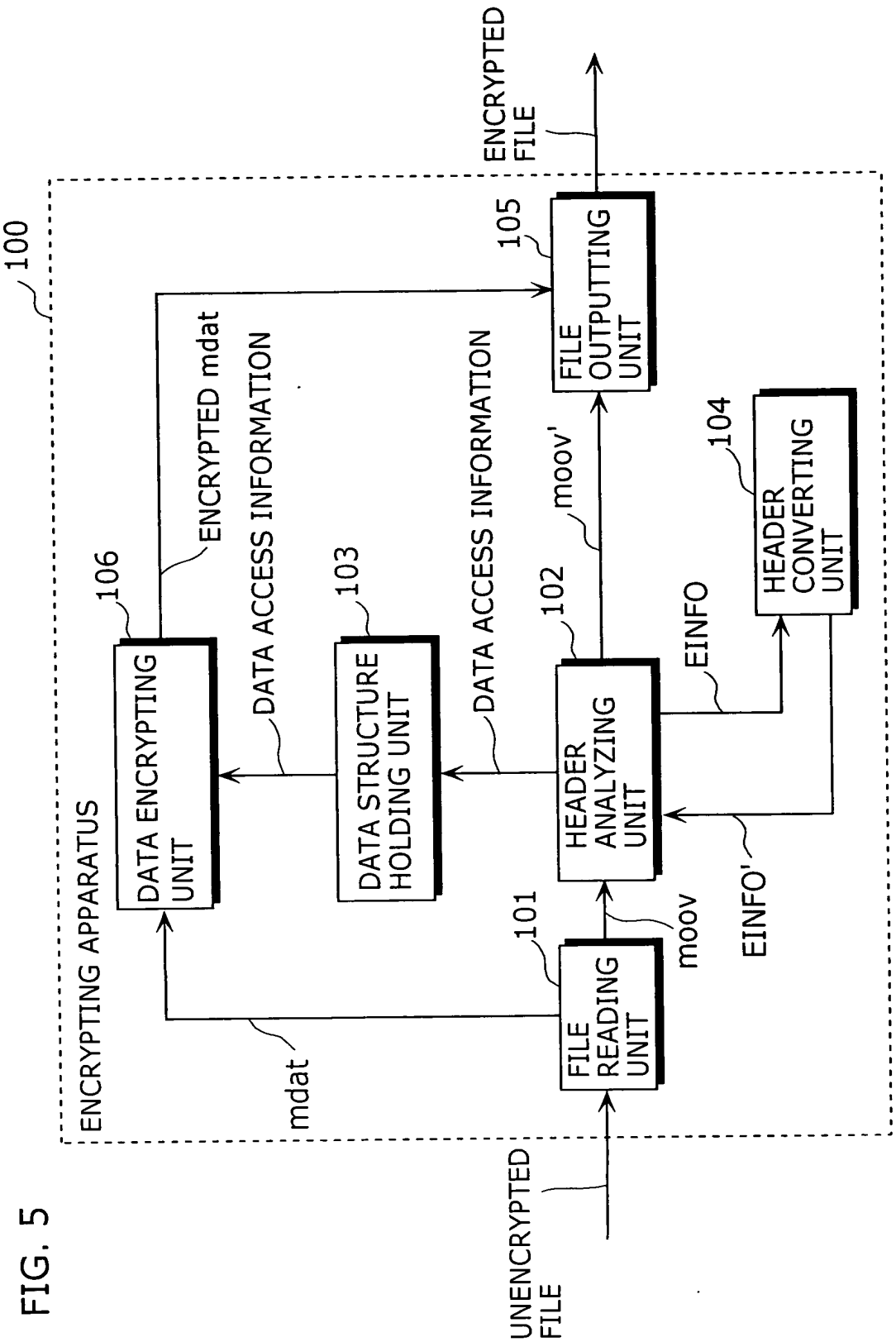

100
ENCRYPTING APPARATUS
UNENCRYPTED FILE
ENCRYPTED FILE
FILE READING UNIT
101
HEADER ANALYZING UNIT
102
DATA STRUCTURE HOLDING UNIT
103
HEADER CONVERTING UNIT
104
FILE OUTPUTTING UNIT
105
DATA ENCRYPTING UNIT
106
mdat
moov
EINFO'
EINFO
moov'
DATA ACCESS INFORMATION
DATA ACCESS INFORMATION
ENCRYPTED mdat

FIG. 6A

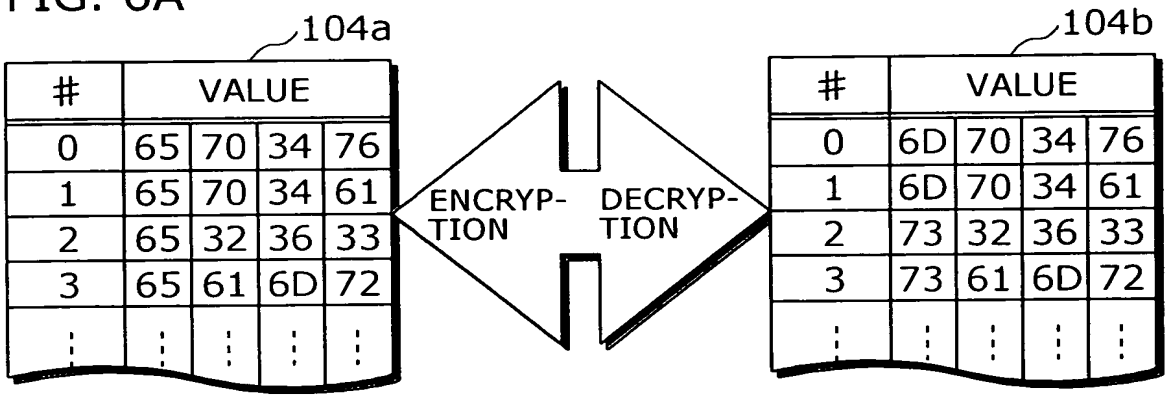


FIG. 6B

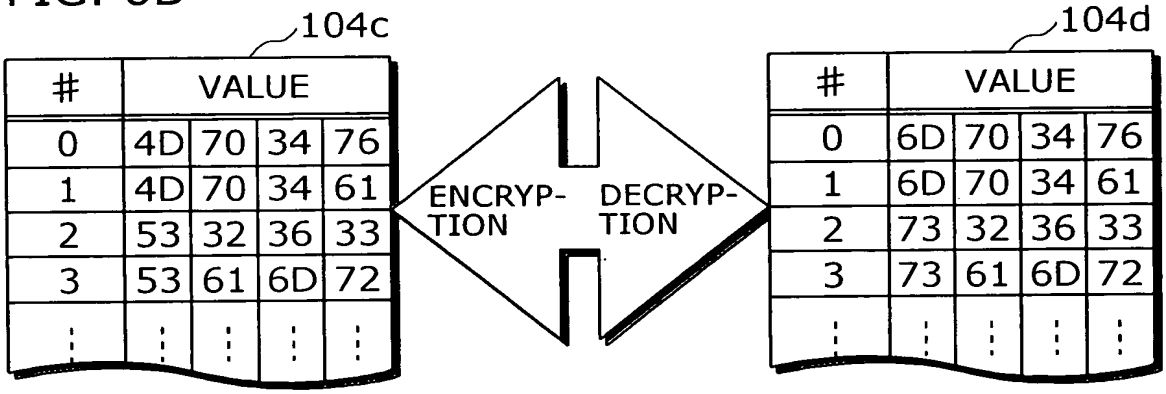


FIG. 6C

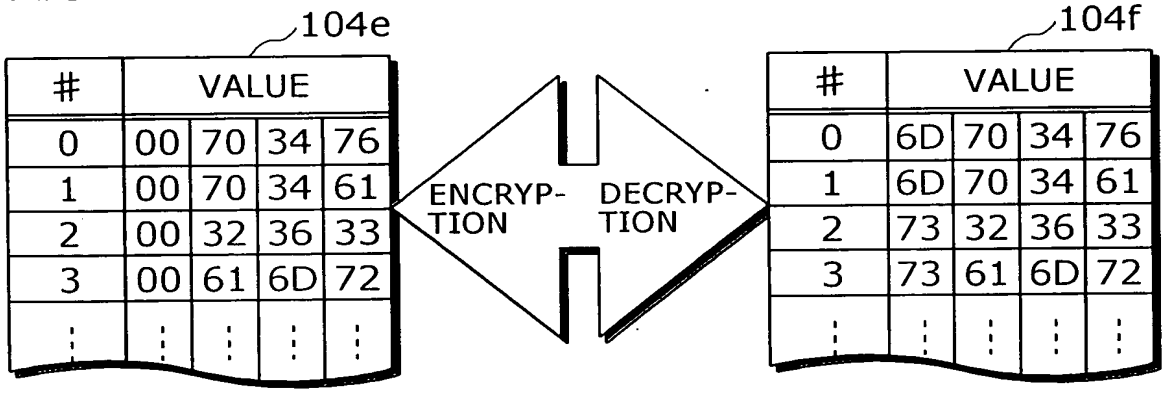


FIG. 7

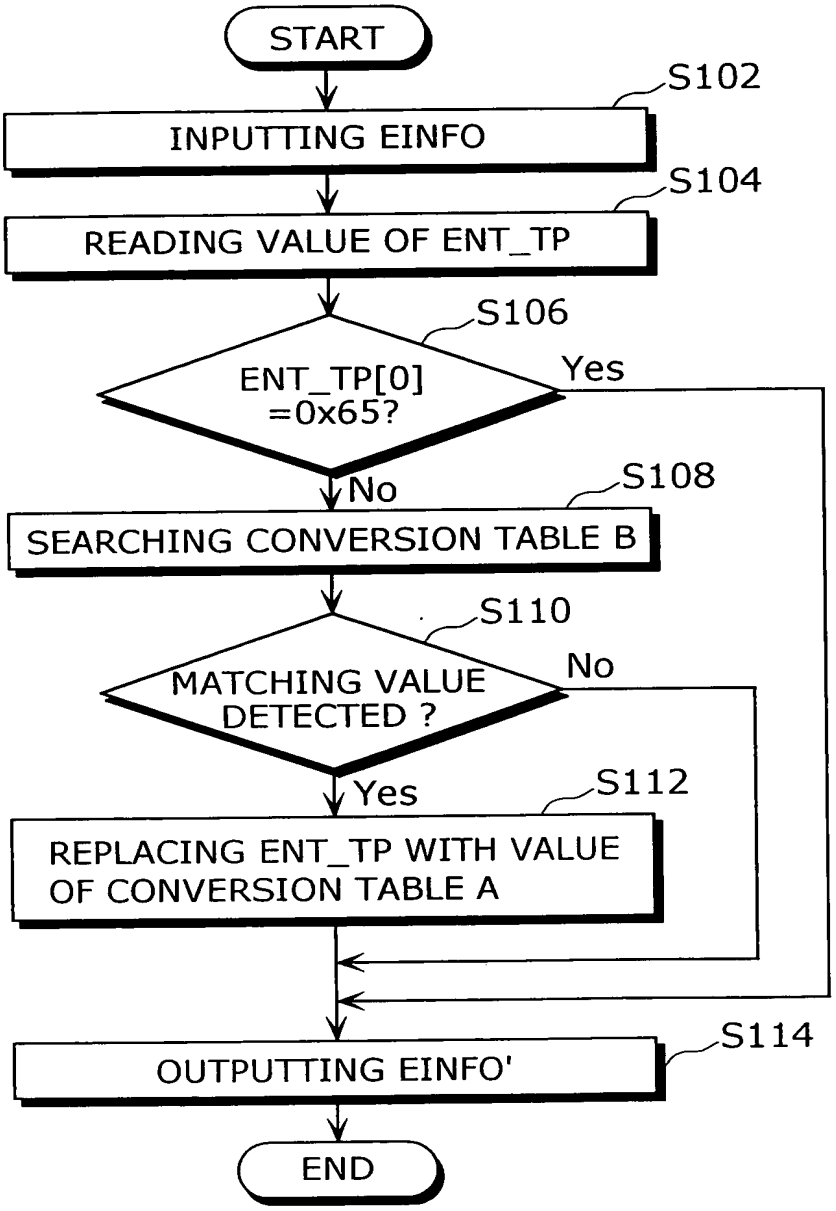

START
S102
INPUTTING EINFO
S104
READING VALUE OF ENT_TP
S106
ENT_TP[0] =0x65?
Yes
No
S108
SEARCHING CONVERSION TABLE B
S110
MATCHING VALUE DETECTED ?
No
Yes
S112
REPLACING ENT_TP WITH VALUE OF CONVERSION TABLE A
S114
OUTPUTTING EINFO'
END

FIG. 8

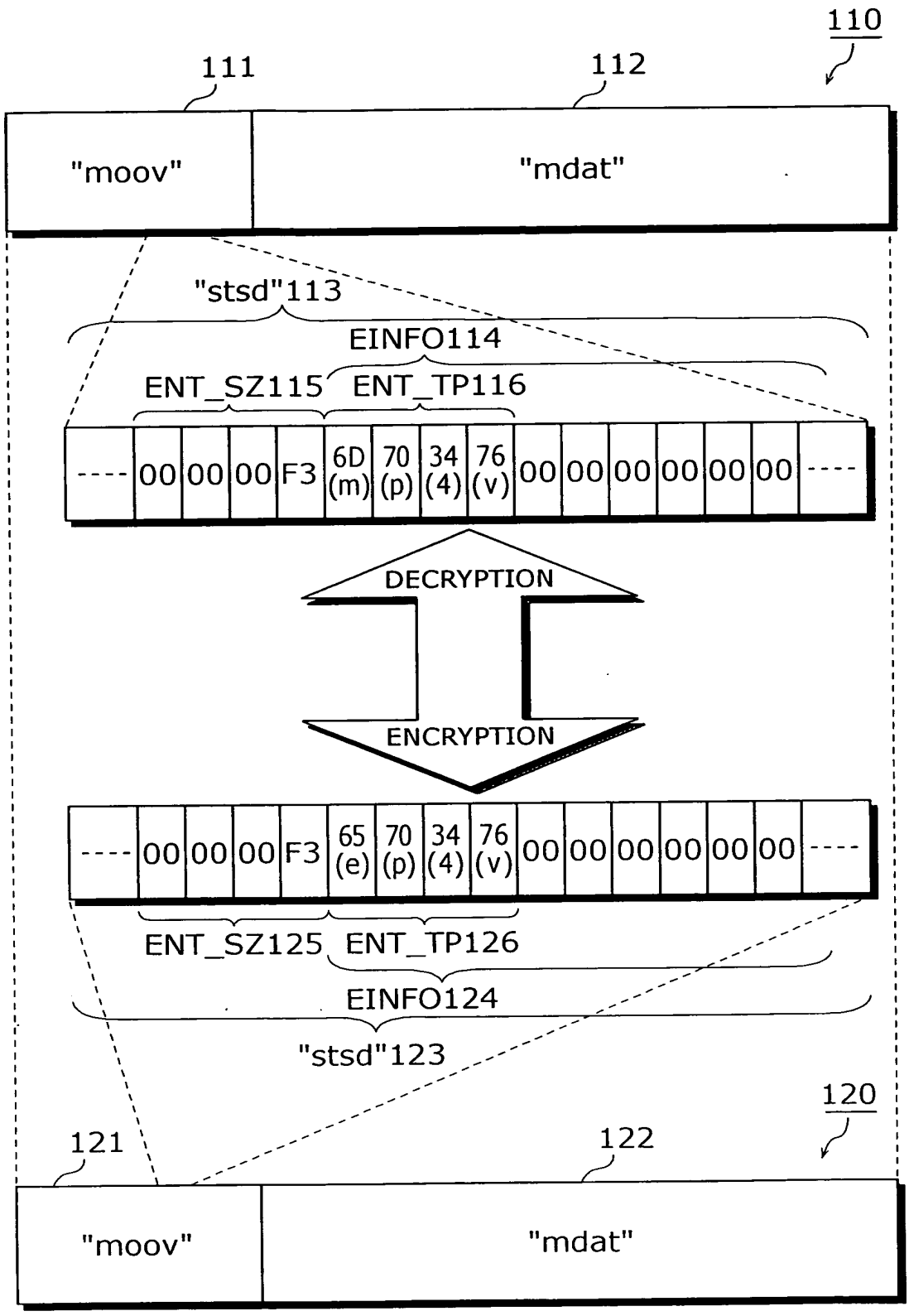

110
111
112
"moov"
"mdat"
"stsd"113
EINFO114
ENT_SZ115
ENT_TP116
---- 00 00 00 F3 6D (m) 70 (p) 34 (4) 76 (v) 00 00 00 00 00 00 ----
DECRYPTION
ENCRYPTION
---- 00 00 00 F3 65 (e) 70 (p) 34 (4) 76 (v) 00 00 00 00 00 00 ----
ENT_SZ125
ENT_TP126
EINFO124
"stsd"123
120
121
122
"moov"
"mdat"

FIG. 9

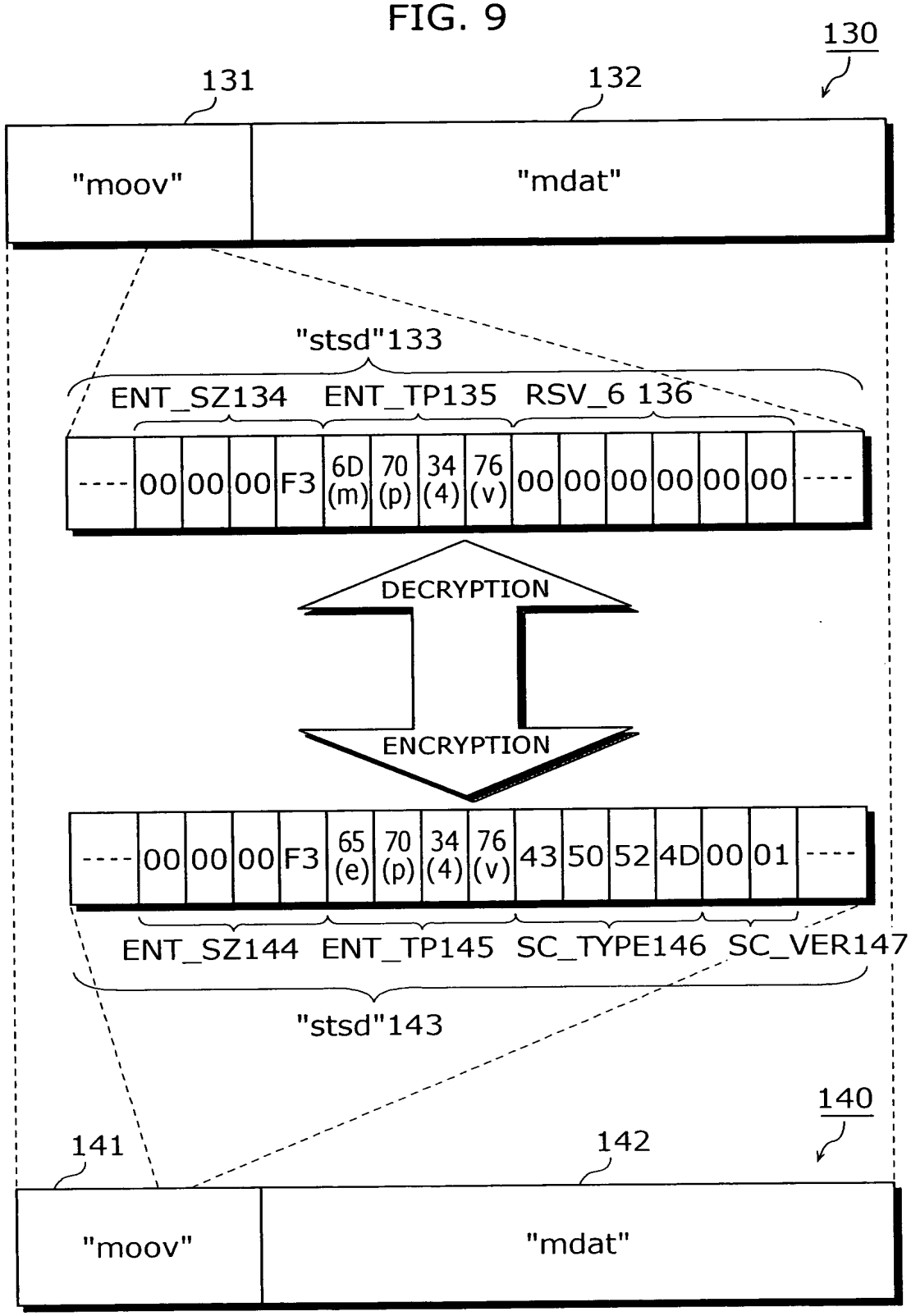

130
131
132
"moov"
"mdat"
"stsd"133
ENT_SZ134 ENT_TP135 RSV_6 136
---- 00 00 00 F3 6D (m) 70 (p) 34 (4) 76 (v) 00 00 00 00 00 00 ----
DECRYPTION
ENCRYPTION
---- 00 00 00 F3 65 (e) 70 (p) 34 (4) 76 (v) 43 50 52 4D 00 01 ----
ENT_SZ144 ENT_TP145 SC_TYPE146 SC_VER147
"stsd"143
140
141
142
"moov"
"mdat"

FIG. 10

104g

	ENCRYPTING METHOD 1	ENCRYPTING METHOD 2	ENCRYPTING METHOD 3	
mp4v	^A	^A'	^A"	---
samr	^B	^B'	^B"	---
mp4a	^C	^C'	^C"	---
⋮	⋮	⋮	⋮	---

FIG. 11

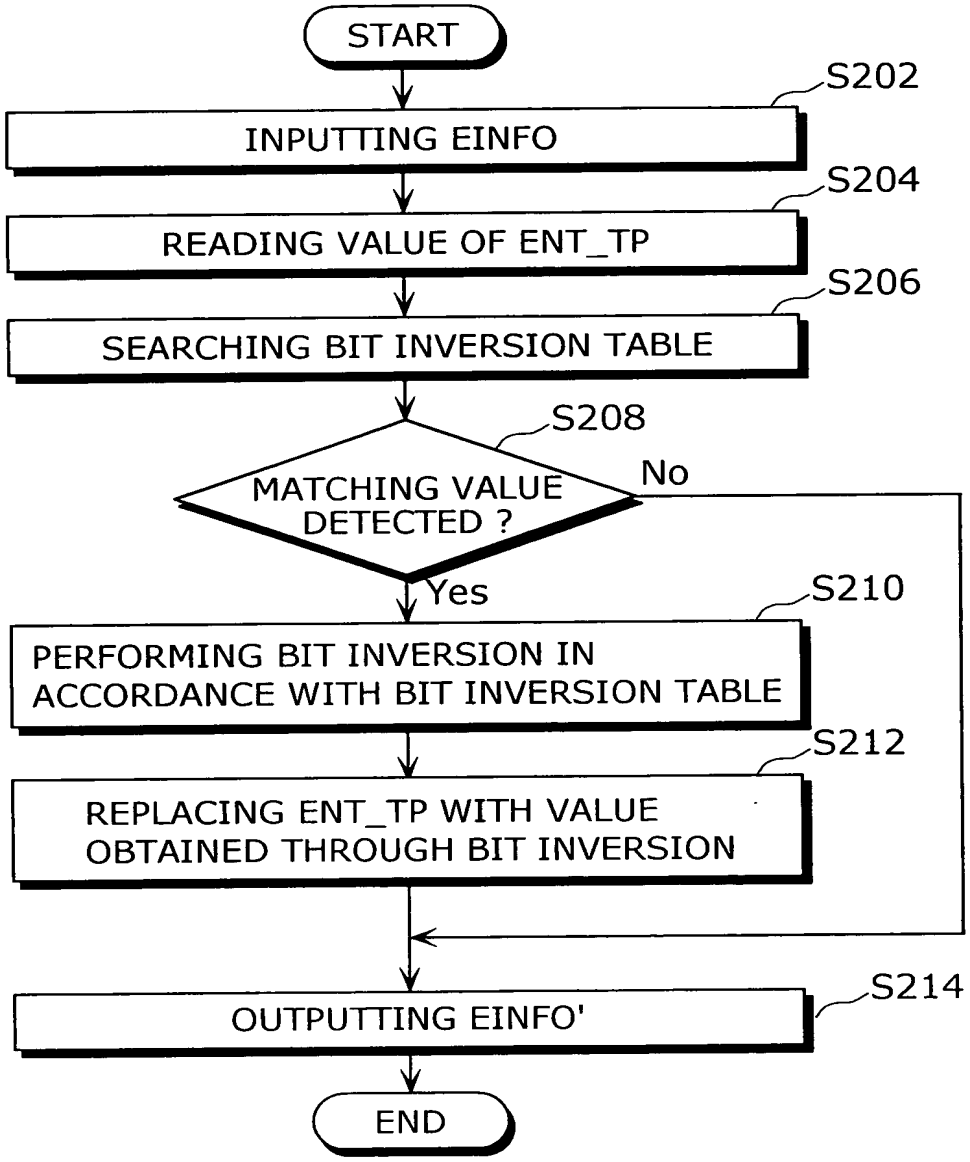
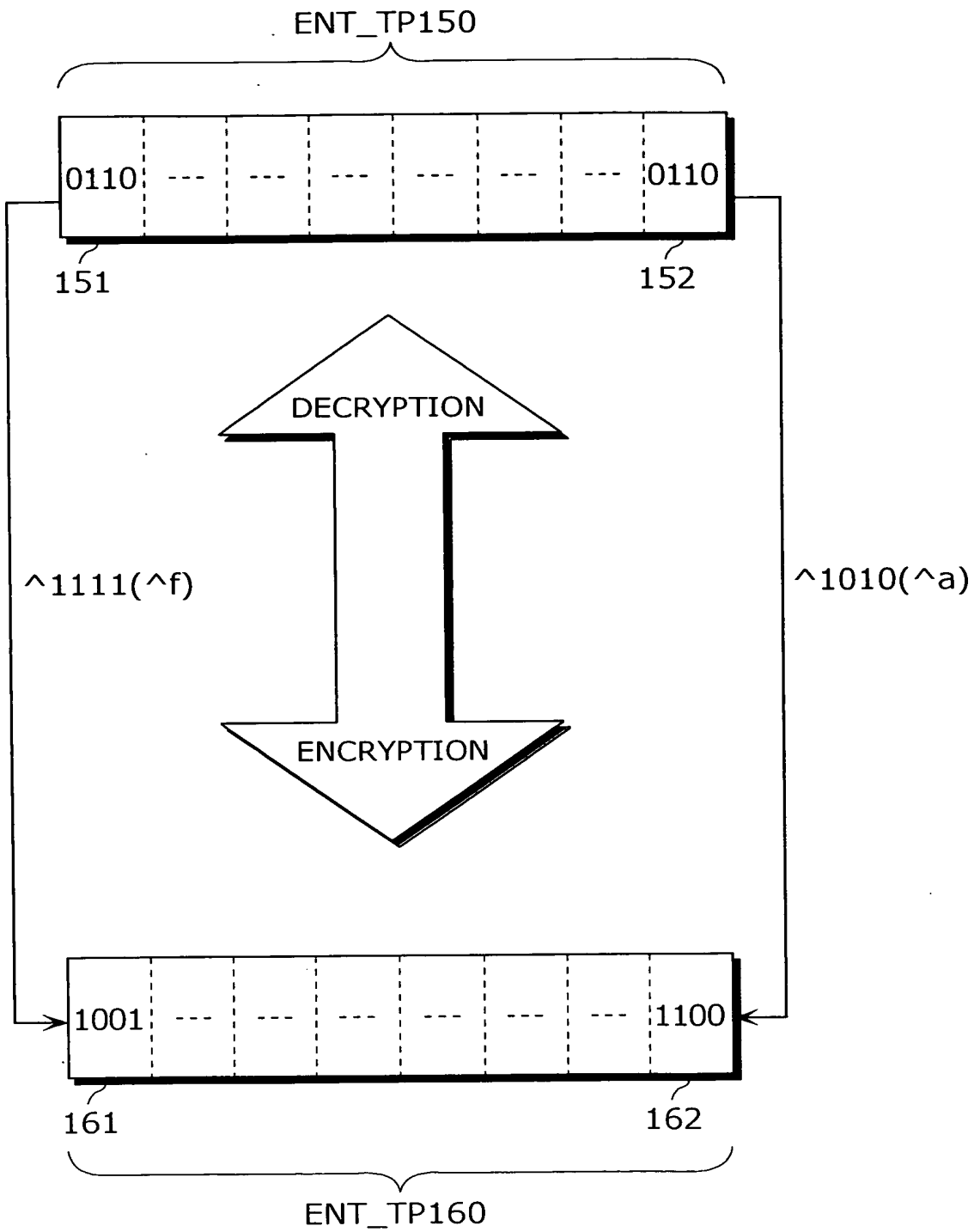

START
S202
INPUTTING EINFO
S204
READING VALUE OF ENT_TP
S206
SEARCHING BIT INVERSION TABLE
S208
MATCHING VALUE DETECTED ?
No
Yes
S210
PERFORMING BIT INVERSION IN ACCORDANCE WITH BIT INVERSION TABLE
S212
REPLACING ENT_TP WITH VALUE OBTAINED THROUGH BIT INVERSION
S214
OUTPUTTING EINFO'
END

FIG. 12


ENT_TP150
0110

0110
151
152
DECRYPTION
^1111(^f)
^1010(^a)
ENCRYPTION
1001

1100
161
162
ENT_TP160

FIG. 13

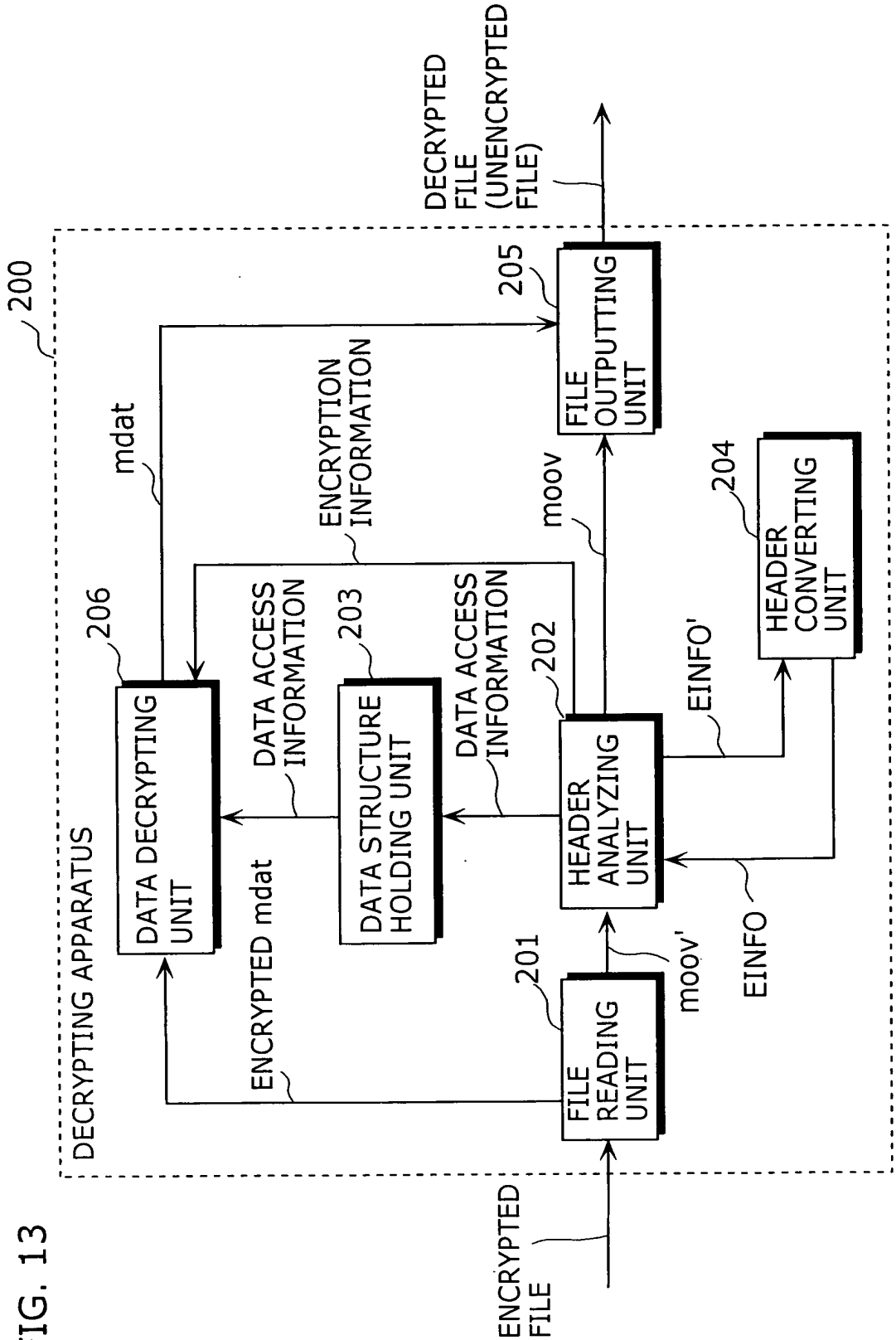

200
DECRYPTING APPARATUS
ENCRYPTED FILE
FILE READING UNIT
201
ENCRYPTED mdat
moov'
EINFO
HEADER ANALYZING UNIT
202
DATA ACCESS INFORMATION
DATA STRUCTURE HOLDING UNIT
203
DATA ACCESS INFORMATION
EINFO'
HEADER CONVERTING UNIT
204
moov
ENCRYPTION INFORMATION
mdat
DATA DECRYPTING UNIT
206
FILE OUTPUTTING UNIT
205
DECRYPTED FILE (UNENCRYPTED FILE)

FIG. 14

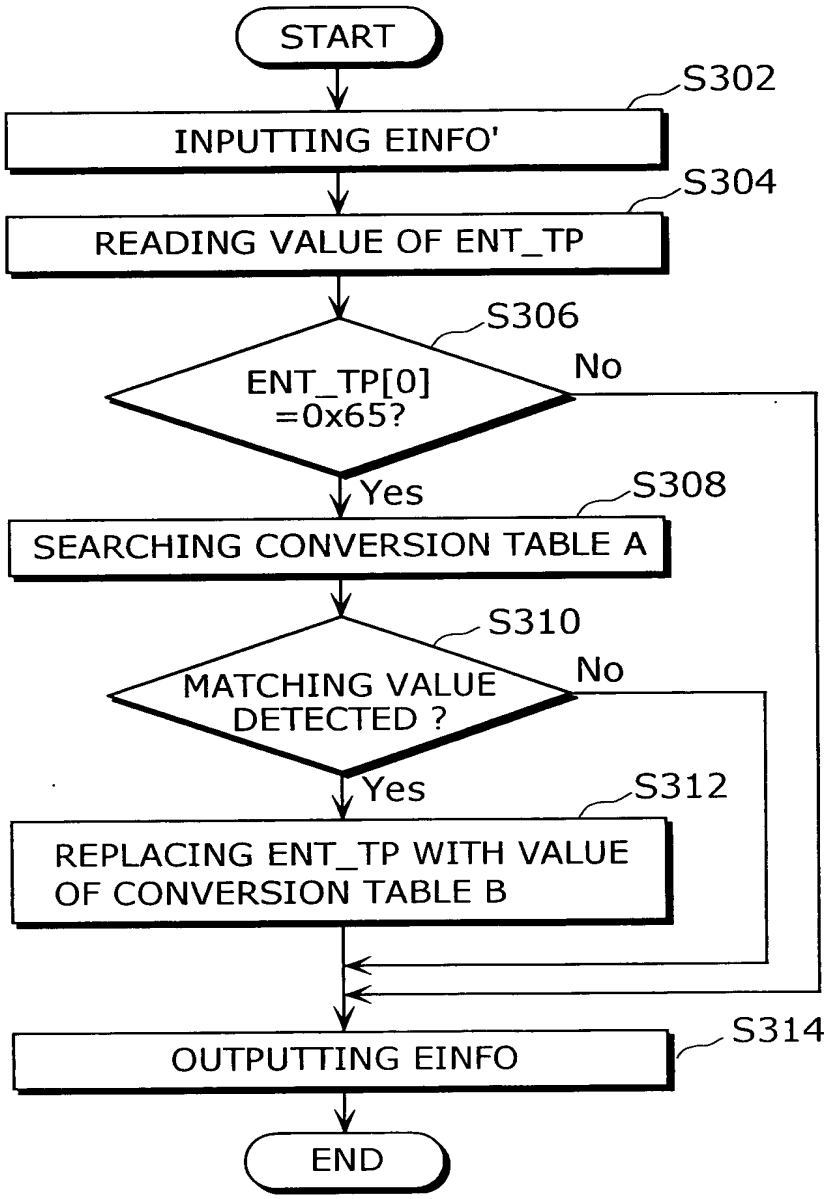

START
S302
INPUTTING EINFO'
S304
READING VALUE OF ENT_TP
S306
ENT_TP[0] =0x65?
No
Yes
S308
SEARCHING CONVERSION TABLE A
S310
MATCHING VALUE DETECTED ?
No
Yes
S312
REPLACING ENT_TP WITH VALUE OF CONVERSION TABLE B
S314
OUTPUTTING EINFO
END

FIG. 15

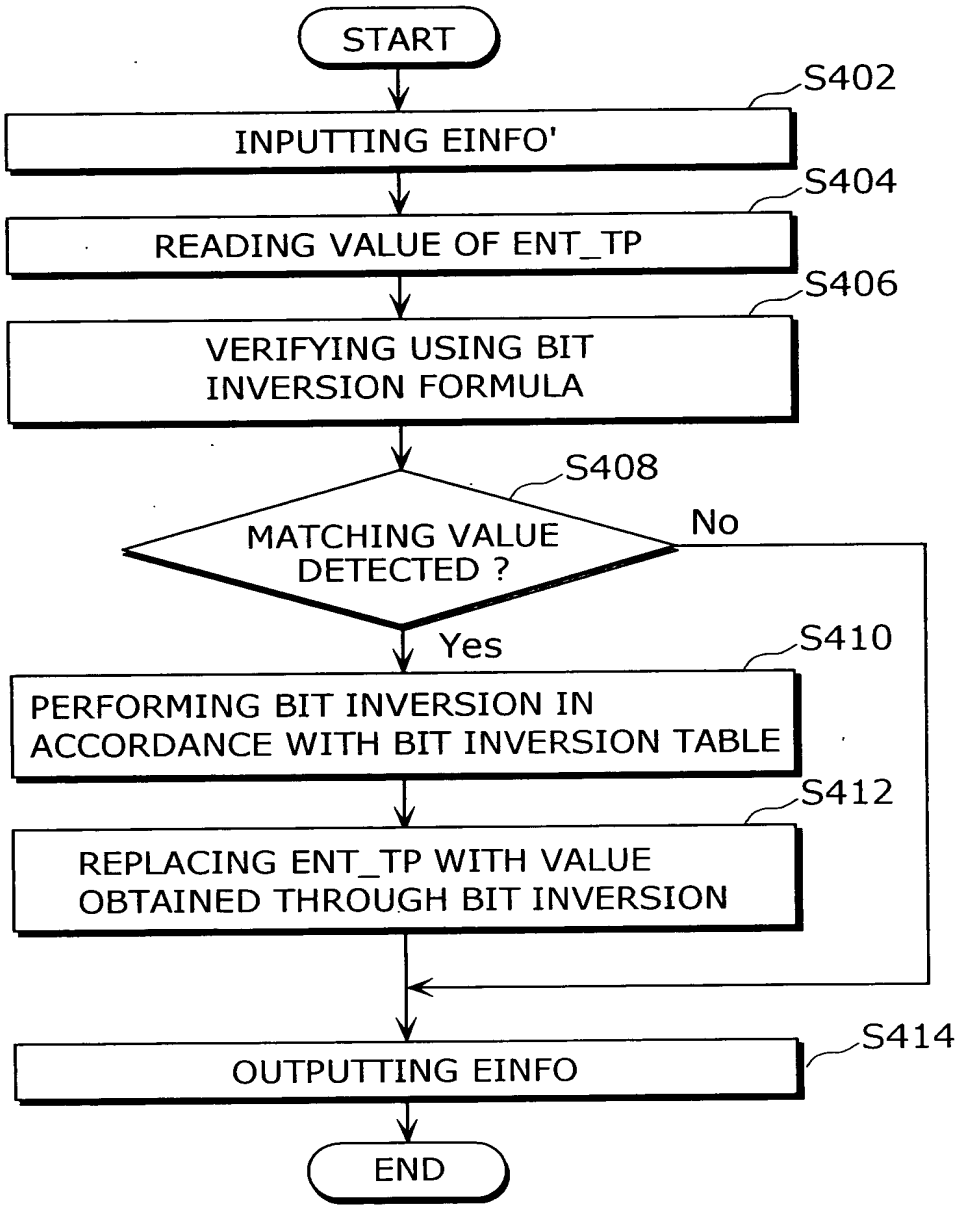

START
S402
INPUTTING EINFO'
S404
READING VALUE OF ENT_TP
S406
VERIFYING USING BIT INVERSION FORMULA
S408
MATCHING VALUE DETECTED ?
No
Yes
S410
PERFORMING BIT INVERSION IN ACCORDANCE WITH BIT INVERSION TABLE
S412
REPLACING ENT_TP WITH VALUE OBTAINED THROUGH BIT INVERSION
S414
OUTPUTTING EINFO
END

FIG. 16

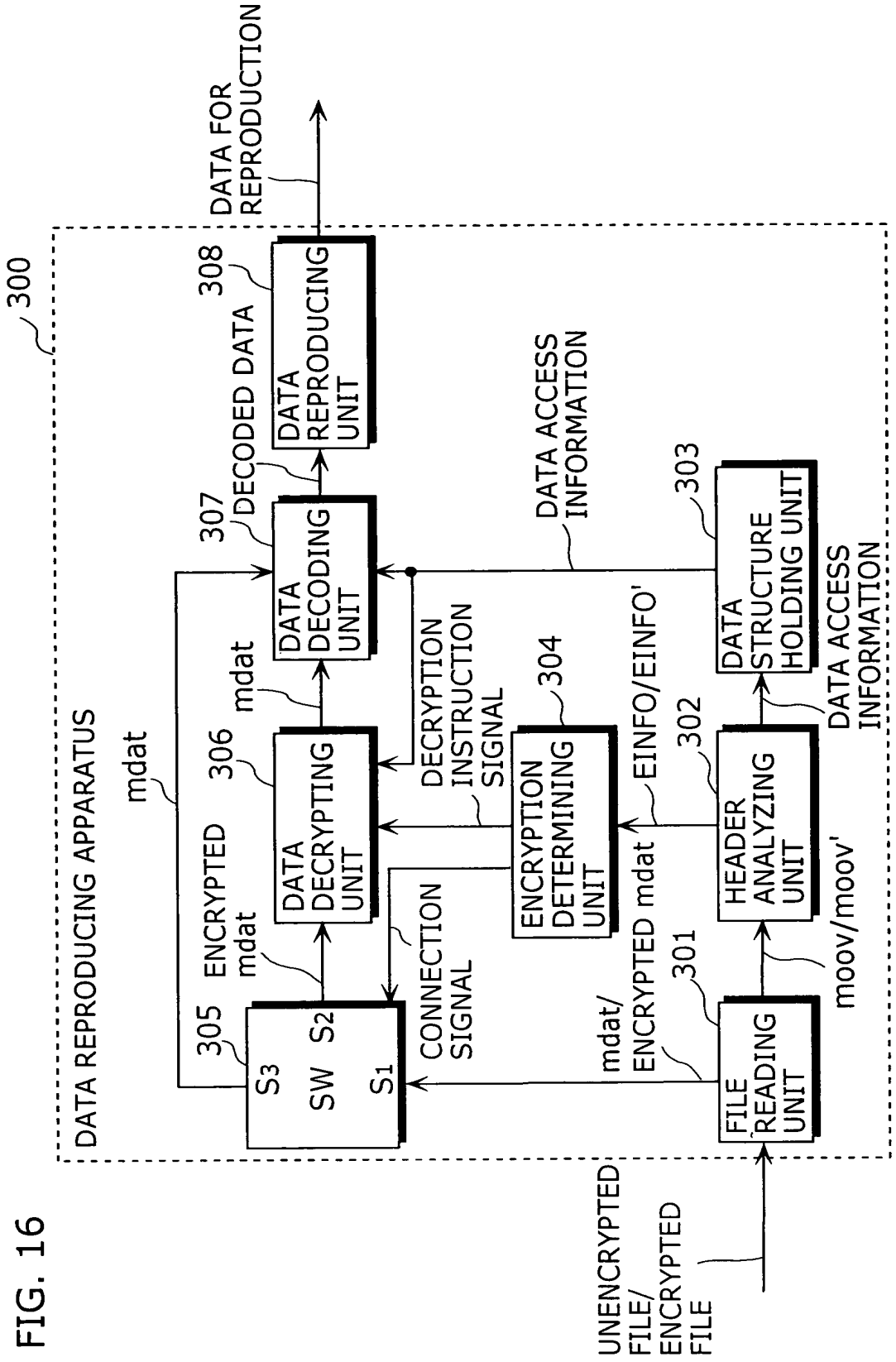
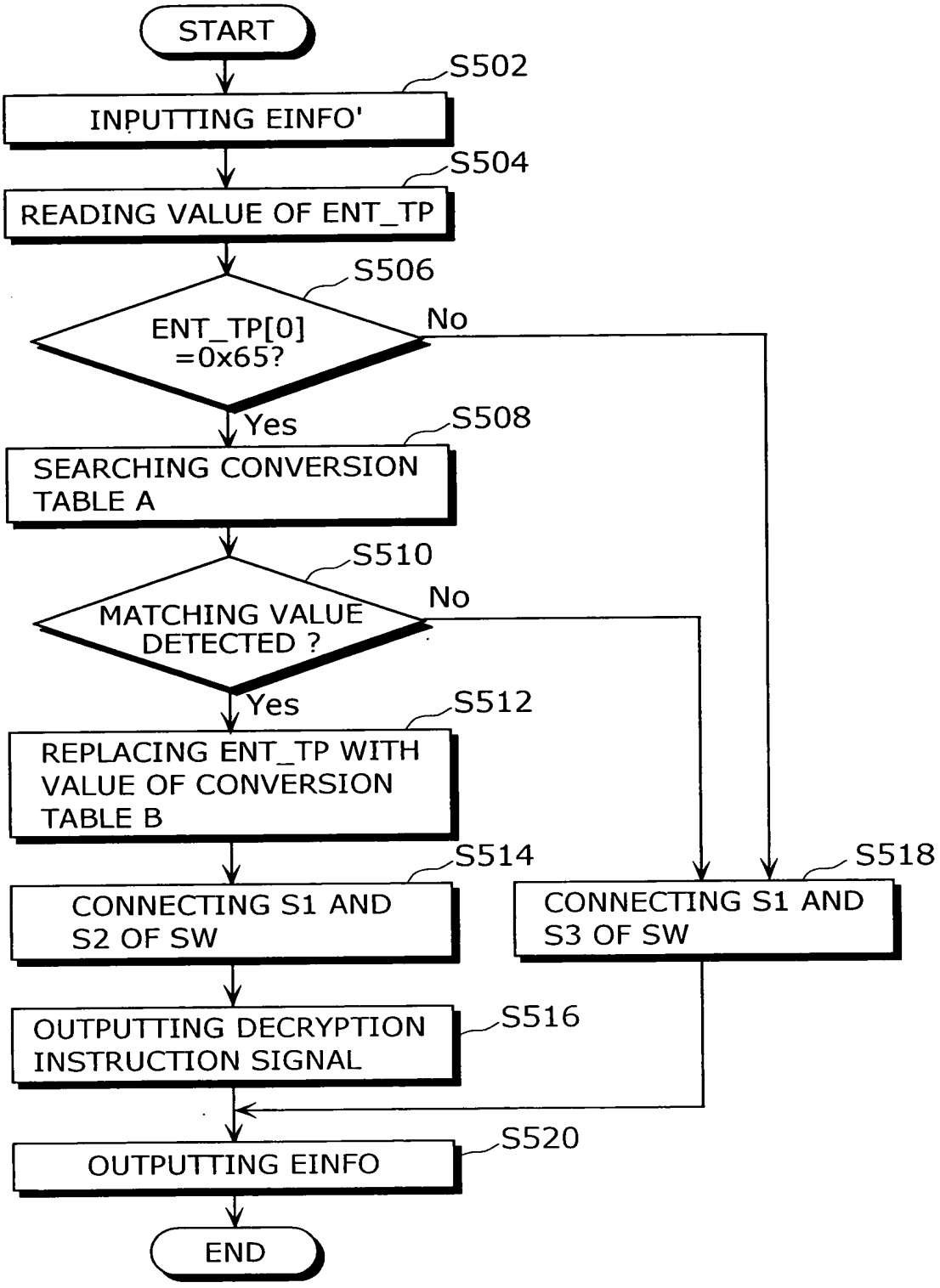

300
DATA REPRODUCING APPARATUS
DATA FOR REPRODUCTION
308
DATA REPRODUCING UNIT
DECODED DATA
307
DATA DECODING UNIT
DATA ACCESS INFORMATION
303
DATA STRUCTURE HOLDING UNIT
mdat
306
DATA DECRYPTING UNIT
DECRYPTION INSTRUCTION SIGNAL
304
ENCRYPTION DETERMINING UNIT
EINFO/EINFO'
302
HEADER ANALYZING UNIT
DATA ACCESS INFORMATION
ENCRYPTED mdat
305
SW
S3
S2
S1
CONNECTION SIGNAL
mdat/ ENCRYPTED mdat
301
FILE READING UNIT
moov/moov'
UNENCRYPTED FILE/ ENCRYPTED FILE

FIG. 17


START
S502
INPUTTING EINFO'
S504
READING VALUE OF ENT_TP
S506
ENT_TP[0] =0x65?
No
Yes
S508
SEARCHING CONVERSION TABLE A
S510
MATCHING VALUE DETECTED ?
No
Yes
S512
REPLACING ENT_TP WITH VALUE OF CONVERSION TABLE B
S514
CONNECTING S1 AND S2 OF SW
S518
CONNECTING S1 AND S3 OF SW
S516
OUTPUTTING DECRYPTION INSTRUCTION SIGNAL
S520
OUTPUTTING EINFO
END

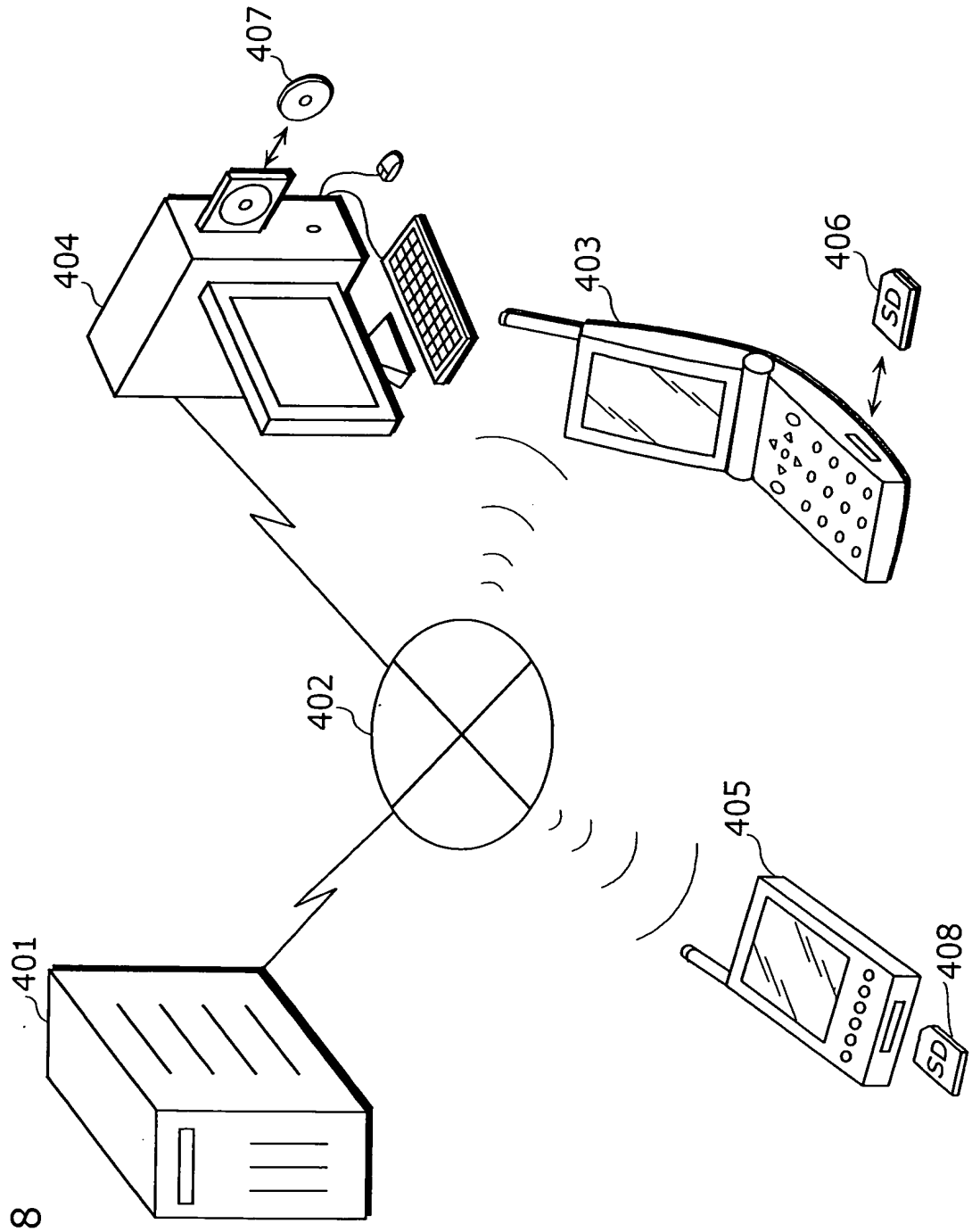


FIG. 18